

REMARKS

Allowable claims 10, 13 and 16 have been rewritten in independent form claims 11 and 14 have been amended and claim 23 has been amended to correct an obvious typographical omission. Claims 9 to 16 and 19 to 23 remain active in this application and claims 1 to 7 which were withdrawn from consideration have been canceled. Please charge any costs to Deposit Account No. 20-0668.

Claims 9, 11, 12, 14, 15 and 19 to 23 were rejected under 35 U.S.C. 102(b) as being anticipated by Yee et al. (U.S. 5,858,799). The rejection is respectfully traversed.

Claim 21, which replaces claim 8, requires, among other features, a flow cell attached to the surface plasmon resonance layer, having a fluid path, the fluid path having an analyte detection chamber disposed along the fluid path, the analyte detection chamber having an interior region in fluidic communication with the surface plasmon resonance layer and having means for generation of a molecular interaction bias across the analyte detection chamber. No such features are taught or even remotely suggested by Yee et al.

Claims 9, 22 and 23 depend from claim 21 and therefore define patentably over Morozov et al. for at least the reasons set forth above with reference to claim 21.

In addition, claim 9 further limits claim 21 by requiring that the molecular interaction bias be electrical. No such combination is taught or suggested by Yee et al.

Claim 22 further limits claim 21 by requiring that the means for generation of a molecular interaction bias across the analyte detection chamber comprise a first electrode coupled to said surface plasmon resonance layer and a second electrode disposed at a surface of said analyte detection chamber opposed to said first electrode. No such structure is taught or suggested by Yee et al. in the combination as claimed.

Claim 23 further limits claim 22 by requiring that the second electrode form a part of the fluid path of the analyte detection chamber. No such structure is taught or suggested by Yee et al. either alone or in the combination as claimed.

Claim 11 requires, among other features, a fluid path having an analyte detection chamber in fluidic communication with the surface plasmon resonance layer having means for generating a molecular interaction bias across the analyte detection chamber to direct bias responsive conjugated molecules to the surface plasmon resonance layer. No such feature is taught or suggested by Yee et al. either alone or in the combination as claimed as discussed above with reference to claim 21.

Claims 12 and 13 depend from claim 11 and therefore define patentably over Yee et al. for at least the reasons presented above with reference to claim 11.

In addition, claim 12 further limits claim 11 by requiring that the molecular interaction bias be electrical. No such combination is taught or suggested by Yee et al.

Claim 14 requires, among other steps, the step of providing a fluid path having an analyte detection chamber in fluidic communication with the derivatized surface plasmon layer. No such step is taught or suggested by Yee et al. either alone or in the combination as claimed.

Claim 15 depends from claim 14 and therefore defines patentably over Yee et al. for at least the reasons presented above with reference to claim 14.

In addition, claim 15 further limits claim 14 by requiring that the molecular interaction bias be electrical. No such combination is taught or suggested by Yee et al.

Claim 19 depends from claim 14 and therefore defines patentably over Yee et al. for at least the reasons presented above with reference to claim 14.

In addition, claim 19 further limits claim 14 by requiring that the conjugated analyte be for the kinetically enhanced measurement of molecular interactions in the groups consisting of: avidin-biotin binding, antibody-antigen binding, antibody-antigen dissociation kinetics, protein binding, protein-nucleic acid binding, specific detection of small molecules, concentration of analytes, measurement of oligonucleotide complements, mixture proportions, receptor-ligand interactions, aptamer interactions, and molecular assembly events. No such combination is taught or suggested by Yee et al.

Claim 20 depends from claim 19 and therefore defines patentably over Yee et al. for at least the reasons presented above with reference to claim 19.

In addition, claim 20 further limits claim 19 by requiring that the conjugated analyte be for the kinetically enhanced measurement of molecular interactions in competitive binding assays. No such combination is taught or suggested by Yee et al.

In view of the above remarks, favorable reconsideration and allowance are respectfully requested.

Respectfully submitted,



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